

UNITED STATES PATENT APPLICATION

FOR

A METHOD AND SYSTEM TO FACILITATE PRE-ORDERING VIA AN
ELECTRONIC COMMERCE FACILITY, AND AUTOMATICALLY TO
FACILITATE SATISFYING OF A PRE-ORDER UPON LISTING OF AN
APPROPRIATE OFFER VIA THE ELECTRONIC COMMERCE FACILITY

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**A METHOD AND SYSTEM TO FACILITATE PRE-ORDERING VIA AN
ELECTRONIC COMMERCE FACILITY, AND TO AUTOMATICALLY
FACILITATE SATISFYING OF A PRE-ORDER UPON LISTING OF AN
APPROPRIATE OFFER VIA THE ELECTRONIC COMMERCE FACILITY**

FIELD OF THE INVENTION

[0001] The present invention relates broadly to the field of electronic commerce and, more specifically, to facilitating the pre-ordering of an offering (e.g., goods and services), via an automated transaction facility.

BACKGROUND OF THE INVENTION

[0002] A potential buyer, when accessing an electronic commerce facility (e.g., an online auction facility, exchange or the like) may often be unwilling to conclude a transaction relating to current offerings (e.g., goods or services) provided via the electronic commerce facility for a number of reasons. For example, the potential buyer may be unable to locate an offering that satisfies the exact requirements of the potential buyer. The potential buyer may be unwilling or unable to establish a transaction under the terms and conditions of a current offering, but may be willing to conclude that the transaction if the terms and conditions of that offering are modified, or if an alternative offering having different terms and conditions becomes available via the electronic commerce facility.

[0003] In order to monitor an electronic commerce facility for modifications in the terms and conditions of an offering, or to locate an alternative offering that satisfies the requirements of potential buyer, the potential buyer may be required to continually

monitor the electronic commerce facility. This continual monitoring of electronic commerce facility is inconvenient and time-consuming.

[0004] The above-identified problem is particularly prevalent in the person-to-person electronic commerce environment, where different instances of a specific item (e.g., a book or a compact disc) can vary dramatically in the sale price, condition, format, color etc. Further, the reputations of sellers in such person-to-person environments play an important part in the decision of a buyer to purchase a particular item from a particular seller.

SUMMARY OF THE INVENTION

[0005] According to a first aspect of the present invention, there is provided a method to facilitate a transaction via a network-based transaction facility. A pre-order relating to an item is recorded at the transaction facility, the pre-order specifying a plurality of pre-order attributes. An offer to sell an offering (e.g., an item) is received at the transaction facility, the offer specifying a plurality of offer attributes. A matching operation is automatically performed to detect a correspondence between the pre-order and the offer, the matching operation utilizing at least one pre-order attribute of the plurality of pre-order attributes and at least one offer attribute of the plurality of offer attributes to detect the correspondence. Responsive to a detection of the correspondence by the matching operation, a transaction facilitating operation is automatically performed to facilitate establishment of a transaction whereby the pre-order is satisfied by the offer to sell the item.

[0006] In one embodiment, the transaction facilitating operation includes communicating the pre-order to a seller from which the offer to sell was received. The

communication of the pre-order may include communicating to the seller a user-selectable option to instantly satisfy the pre-order with the offer and thereby to establish the transaction.

[0007] In a further embodiment, the transaction facilitating operation includes establishing a transaction whereby the pre-order is satisfied by the offer when all of the pre-order attributes of the plurality of pre-order attributes are satisfied by the plurality of offer attributes.

[0008] According to a second aspect of the present invention, there is provided a method to facilitate pre-ordering of an offering via a network-based transaction facility. Responsive to user identification of an offering, offering information is communicated to a user regarding the offering. In conjunction with the offering information, a selectable option is communicated to the user to pre-order the offering by specifying pre-order attribute information.

[0009] Other features of the present invention will be apparent from the accompanying drawings and from the detailed description that follows.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The present invention is illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements and in which:

Figure 1 is a block diagram illustrating an exemplary network-based transaction facility in the form of a fix-price commerce facility.

Figure 2A is a block diagram illustrating exemplary tables may be included within database tables maintained and access by a database logic.

Figure 2B is a diagrammatic representation of application logic that may operate in conjunction with a web/application server of the commerce facility.

Figure 3 is a flow chart illustrating a method, according to an exemplary embodiment of the present invention, to facilitate pre-ordering of an offering via the commerce facility.

Figure 4 provides representation of an exemplary login user interface, according to an exemplary embodiment of the present invention.

Figure 5 provides a depiction of a listing user interface, according to an exemplary embodiment of the present invention.

Figure 6A illustrates a pre-order user interface, according to an exemplary embodiment of the present invention, in the form of a HTML document.

Figures 6B – 6E illustrate further examples of pre-order user interfaces that may be generated by a commerce facility and presented to a potential buyer in order to solicit pre-order attribute information.

Figures 7A – 7C show a flowchart illustrating a method, according to an exemplary embodiment of the present invention, of facilitating establishment of a transaction via a

network-based transaction facility, whereby a correspondence is detected between a pre-order and an offer.

Figure 8A illustrates an exemplary sales interface that may be generated to facilitate navigation by a seller to a specific offering.

Figure 8B illustrates an exemplary offering identification user interface that includes an item description field to receive an item description in the form of a UPC code.

Figure 8C illustrates an exemplary condition and notes user interface.

Figures 8D – 8E provide examples of account set-up interfaces.

Figure 8F displays a price user interface, according to an exemplary embodiment of the present invention, which shows a pre-order box that includes attribute information regarding a pre-order identified as at least partially matching an offer.

Figure 9 is a flowchart illustrating a method, according to an exemplary embodiment of the present invention, whereby a batch specification of multiple offers may be utilized by a commerce facility to satisfy one or more pre-orders.

Figure 10 shows a diagrammatic representation of a machine in the exemplary form of a computer system in which a set of instructions may be executed.

DETAILED DESCRIPTION

[0011] A method and system to facilitate pre-ordering via an electronic commerce facility, and automatically to facilitate the satisfying of a pre-order upon listing of an appropriate offer via the electronic commerce facility, are described. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be evident, however, to one skilled in the art that the present invention may be practiced without these specific details.

Terminology

[0012] For the purposes of the present specification, the term “transaction” shall be taken to include any communications between two or more entities and shall be construed to include, but not be limited to, commercial transactions including fixed-price sale and purchase transactions, auctions and the like.

Architecture-Transaction Facility

[0013] **Figure 1** is a block diagram illustrating an exemplary network-based transaction facility in the form of a fixed-price commerce facility 10. While an exemplary embodiment of the present invention is described within the context of the commerce facility 10, it will be appreciated by those skilled in the art that the invention will find application in many different types of computer-based, and/or network-based, commerce facilities. It will also be appreciated by those skilled in the art that the invention may be used in commerce facilities of other architectures.

[0014] The commerce facility 10 includes a number of types of front-end servers and back-end servers. The front-end servers include an e-mail server 12 that receives and transmits e-mail communications on behalf of the commerce facility 10. The e-mail server 12 may provide, *inter alia*, automated e-mail communications to users of the commerce facility 10.

[0015] The front-end servers further include a Web/application server 14 that includes the application and business logic modules. The Web/application server 14 may incorporate a number of modules of application logic that support various functions provided by the commerce facility 10.

[0016] The back-end servers include a back-end processing server 16, a credit card authorization server 18, and a database engine 20 including database logic 22 that accesses a collection of database tables 24.

[0017] The commerce facility 10 may interact with a client program 30, such as a browser (e.g., the Internet Explorer distributed by Microsoft Corp. of Redmond Washington) that executes on a client machine 32 (e.g., a personal computer (PC), a personal digital assistant (PDA), a cellular telephone, or other mobile device). The client machine 32 accesses the commerce facility 10 via a network such as, for example, the Internet 34. Other examples of networks that a client machine 32 may utilize to access the commerce facility 10 include a wide area network (WAN), a local area network (LAN), a wireless network (e.g., a cellular network), or a Public Switched Telephone Network (PSTN).

Database Structure and Application Logic

[0018] **Figure 2A** is a block diagram illustrating exemplary tables that may be included within the database tables 24, maintained by and accessed via the database logic 22. The database tables 24 may, in one embodiment, be implemented as a relational database, and include a number of tables having entries, or records, that are linked by indices and keys. In an alternative embodiment, the database tables 24 may be implemented as a collection of blocks in a block-oriented database.

[0019] As illustrated, the database tables 24 may include an items table 26 that includes a record for each item (or offering) that is available for purchase via the commerce facility 10. To this end, each of the records within the items table 26 may include an item identifier, an item description, an item price, a seller identifier etc.

[0020] A pre-order table 28 includes a record for each pre-order for an item (or offering) that may become available via the commerce facility 10 under certain terms and conditions. A description of the fields that may be included within an exemplary embodiment of the pre-order table 28 are provided immediately below:

Name	Type
-----	-----
PRE-ORDER_ID	NUMBER
STATE_ID	NUMBER
ACCOUNT_ID	NUMBER
RELEASE_ID	NUMBER
ADDRESS_ID	NUMBER
CREDIT_CARD_ID	NUMBER
PRODUCT_TYPE_ID	NUMBER

ORDER_ITEM_ID	NUMBER
CREATE_DATE	DATE
EXPIRE_DATE	DATE
TIMESTAMP	DATE
MAX_PRICE	NUMBER(10,2)
CONDITION_GRADE	NUMBER
MIN_SELLER_RATING	NUMBER(1)
ACCEPT_UNRATED	NUMBER(1)
SHIP_FORMAT_ID	NUMBER

[0021] A pre-order log table 33 is utilize to track authorization to satisfy a pre-order utilizing an offering, as will be described in further detail below, once a match between a pre-order and an offering is detected. A description of the fields that may be included within an exemplary embodiment of a pre-order log table 33 is provided immediately below:

Name	Type
-----	-----
LOG_ID	NUMBER
PRE-ORDER_ID	NUMBER
CREDIT_CARD_ID	NUMBER
AMOUNT	NUMBER(10,2)
PN_REFERENCE	VARCHAR2(20)
PN_RESULT_CODE	NUMBER

PN_RESPONSE_CODE	VARCHAR2(1)
PN_ERROR_CODE	NUMBER
PN_AUTH_CODE	VARCHAR2(20)
PN_AVS_ADDRESS	VARCHAR2(1)
PN_AVS_ZIP	VARCHAR2(1)
NOTES	VARCHAR2(200)
TIMESTAMP	DATE
PRE-ORDER_EVENT_ID	NUMBER(2)

[0022] A pre-order event table 31 is utilized to track pre-order events. A description of the fields that may be included within an exemplary pre-order event table 31 is provided immediately below:

Name	Type
-----	-----
PRE-ORDER_EVENT_ID	NUMBER(4)
PRE-ORDER_EVENT_DESC	VARCHAR2(100)

[0023] A pre-order state table 35 is utilized to track the respective states of pre-orders for which records exist within the pre-order table 28. A description of exemplary states is provided below. A description of the fields that may be included within a record of the pre-order state table 35 is provided immediately below:

Name	Type
-----	-----
STATE_ID	NUMBER
STATE_DESC	VARCHAR2(200)

[0024] **Figure 2B** is a diagrammatic representation of application logic 40 that may operate in conjunction with the Web/application server 14 of the commerce facility 10. The application logic 40 includes, *inter alia*, (1) pre-order logic 41, which in turn includes, *inter alia*, a set_pre-order database procedure 42 and a sell_now database procedure 44 and (2) matching logic 46. Dealing first with the pre-order logic 41, the pre-order logic 41 operates to perform a number of operations with respect to a particular pre-order record within the pre-order table 28 on the occurrence of certain events. Specifically, the pre-order logic 41 may set the state of a particular pre-order to an active, suspended, reserved, locked, declined, confirmed or deleted state. The pre-order logic 41 includes a number of state variables, listed below, that record the state of a particular pre-order, and a number of procedures that operate to modify the state of a pre-order, and to perform various functions associated with changing the state of a pre-order. A description of the variables and procedures that are included within an exemplary embodiment of the pre-order logic 41 is provided immediately below:

Element	Type
-----	-----
STATE_ACTIVE	CONSTANT
STATE_NEW	CONSTANT
STATE_SUSPENDED	CONSTANT

STATE_SUSPENDED_NEW	CONSTANT
STATE_RESERVED	CONSTANT
STATE_RESERVED_INTERACTIVELY	CONSTANT
STATE_LOCKED	CONSTANT
STATE_DECLINED	CONSTANT
STATE_DECLINED_EMAIL_SENT	CONSTANT
STATE_CONFIRMED	CONSTANT
STATE_CONFIRMED_EMAILS_SENT	CONSTANT
STATE_DELETED	CONSTANT
EVENT_CC_CHARGE_FAILED	CONSTANT
EVENT_ACTIVATE_EXPIRED	CONSTANT
CLEAN_BATCH_RESERVED	PROCEDURE
CLEAN_WEB_RESERVED	PROCEDURE
CONFIRM	PROCEDURE
RESERVE	PROCEDURE
RESET	PROCEDURE
DECLINE_EMAIL_SENT	PROCEDURE
NEW_PRE-ORDER_EMAIL_SENT	PROCEDURE
BACKEND_SALE_EMAIL_SENT	PROCEDURE
DECLINE	PROCEDURE
LOG_EVENT	PROCEDURE
SELL_NOW	PROCEDURE
PROCESS	PROCEDURE
COMPUTE_BUYER_COSTS	PROCEDURE

COMPUTE_PRE-ORDER_COSTS	PROCEDURE
SET_ITEM	PROCEDURE
SET_PRE-ORDER	PROCEDURE
DEL	PROCEDURE
SUSPEND	PROCEDURE
UNSUSPEND	PROCEDURE

[0025] The set_pre-order database procedure 42 is invoked by a front-end call with information supplied by a potential buyer, including login information, to create or update a pre-order within the pre-order table 28. Variables utilized by the procedure 42, according to an exemplary embodiment of the present invention, are listed immediately below:

Parameter	Type
-----	-----
PRE-ORDER_ID_IN	NUMBER
RELEASE_ID_IN	NUMBER
ACCOUNT_ID_IN	NUMBER
ADDRESS_ID_IN	NUMBER
CREDIT_CARD_ID_IN	NUMBER
PRODUCT_TYPE_ID_IN	NUMBER
SHIP_FORMAT_ID_IN	NUMBER
MIN_SELLER_RATING_IN	NUMBER(1)
CONDITION_GRADE_IN	NUMBER

MAX_PRICE_IN	NUMBER(10,2)
EXPIRE_DATE_IN	DATE
ACCEPT_UNRATED_IN	NUMBER(1)
PRE-ORDER_ID_OUT	NUMBER

[0026] The sell_now database procedure 44 is invoked by a front-end call with information supplied by a seller, including login information, to satisfy a pre-order within the pre-order table 28 with an offer received from the seller. Variables utilized by the procedure 44, according to an exemplary embodiment of the present invention, are listed immediately below:

Parameter	Type
-----	-----
ACCOUNT_ID_IN	NUMBER
RELEASE_ID_IN	NUMBER
EXISTING_ITEM_ID_IN	NUMBER
PRICE_IN	NUMBER(10,2)
PRODUCT_TYPE_ID_IN	NUMBER
SELL_COND_IN	NUMBER
SHIP_FORMAT_ID_IN	NUMBER
PRICING_METHOD_ID_IN	NUMBER
NOTES_IN	VARCHAR2(4000)
SELLER_NOTES_IN	VARCHAR2(4000)
CLIENT_SESSION_ID_IN	VARCHAR2(300)

PRE-ORDER_ID_IN	NUMBER
TOTAL_IN	NUMBER(10,2)
TRANS_ID_IN	VARCHAR2(20)
RES_CODE_IN	NUMBER
RESP_CODE_IN	VARCHAR2(1)
ERR_CODE_IN	NUMBER
AUTH_CODE_IN	VARCHAR2(20)
ADDR_CODE_IN	VARCHAR2(1)
ZIP_CODE_IN	VARCHAR2(1)
OFFER_ID_IN	NUMBER
INVOICE_ID_OUT	NUMBER
ORDER_ID_OUT	NUMBER

[0027] The matching logic 46 operates in a manner to be described in further detail below to invoke the procedure 44 when a match is detected between a pre-order record within the pre-order table 28 and information regarding an offer from a potential seller via the commerce facility 10.

Methodology-Recording a Pre-order for an Offering

[0028] **Figure 3** is a flowchart illustrating a method 50, according to exemplary embodiment of the present invention, to facilitate pre-ordering of an item (or offering) via a network-based transaction facility, such as the commerce facility 10 illustrated in **Figure 1**. The method 50 commences at block 52 with the generation and communication of a login user interface (e.g., a hypertext markup language (HTML)

document) from the commerce facility 10 to a client machine 32 accessible by a potential buyer. **Figure 4** provides a representation of such a login user interface 80, according to an exemplary embodiment of the present invention, which may be generated by the commerce facility 10 and then communicated to the potential buyer at block 52. It will be noted from **Figure 4** that the user interface 80 facilitates login by existing members of the commerce facility 10, or registration with the commerce facility 10 by users who are currently not members.

[0029] At block 54 of **Figure 3**, the potential buyer inputs appropriate login information (or registration information if the potential buyer is not a registered member), which is communicated back to the commerce facility 10. At block 56, the login information (registration information) is received at the commerce facility 10, and a login status for the potential buyer is registered.

[0030] At block 58, the commerce facility 10 generates and communicates to the potential buyer one or more navigation user interfaces so as to allow the potential buyer to navigate a Web site operated by the commerce facility 10. In one embodiment, the navigation user interfaces may provide the potential buyer with the options of (1) navigating the Web site utilizing search keywords to identify offerings provided for sale by the commerce facility 10 and of (2) navigating the Web site utilizing category listings of offerings provided for sale via the commerce facility 10.

[0031] At block 60, the potential buyer actively utilizes the navigation user interfaces to navigate to a listing user interface that provides specific details regarding a particular item (or offering) that is available for purchase via the commerce facility 10. This navigation information is communicated back to the commerce facility 10 from the client machine 32 operated by the potential buyer.

[0032] At block 62, the commerce facility 10 generates a listing user interface 84 that provides offering attribute information that specifies the attributes of, and provides further details regarding, a particular item (or offering). **Figure 5** provides a depiction of a listing user interface 84, according to an exemplary embodiment of the present invention, for a music album (Amnesiac by Radiohead) to which the potential buyer may have navigated utilizing the navigation interfaces generated at block 58. The exemplary listing user interface 84 displays offering attribute information including description information (e.g., a digital image of an item, a UPC code or an ISBN code), price information, shipping information, a number of units in stock etc. It will also be noted that the listing user interface 84 includes a pre-order indicia in the form of pre-order hypertext 86 that is displayed in conjunction with the offering attribute information and is selectable by the potential buyer to generate a pre-order for the relevant item. Accordingly, if the potential buyer is not willing to purchase the item for which offering attribute information is displayed within the listing user interface 84, the potential buyer has the option of pre-ordering the relevant item by specifying pre-order attribute information that may differ from the offering attribute information (e.g., the price specified as part of the pre-order attribute information may be different from a price specified as part of the offering attribute information).

[0033] Returning to **Figure 3**, at block 64, the potential buyer may select the pre-order indicia (e.g., by clicking on the pre-order hypertext 86) to exercise an option to generate a pre-order relating to the relevant item, this selection then being communicated to the commerce facility 10.

[0034] At block 66, the commerce facility 10 then detects the selection of the pre-order indicia, and proceeds to generate and communicate a sequence of pre-order user

interfaces to the client machine 32 accessed by the potential buyer. The pre-order user interfaces are designed to solicit from the potential buyer pre-order attribute information specifying the pre-order. **Figure 6A** illustrates a pre-order user interface 90, according to an exemplary embodiment of the present invention, in the form of a HTML document that may be communicated from the commerce facility 10 to the client machine 32 for display via the client program 30. The pre-order user interface 90 includes a number of fields to receive pre-order attribute information. A price field 92 is to receive a monetary value, a condition field 94 is to receive a description of a minimum condition of an item that would be acceptable to satisfy the pre-order, a seller rating field 96 is to receive a minimum seller rating for a seller of an item that would be acceptable to satisfy the pre-order, and an expiration field 98 to receive a specification of a time for which the pre-order should remain active.

[0035] In one embodiment, a seller rating is automatically established by the commerce facility 10 based on a trading history of a seller. This automatic establishment of a seller rating may be performed based on metrics that are monitored and determined by the commerce facility 10 (e.g., a speed of delivery, quality of products, a number of transactions obligation defaults etc.). Alternatively, the seller rating may be based, at least in part, on input received by the commerce facility 10 from other users that have transacted with the relevant seller. For example, upon conclusion of the transaction with the seller, a buyer may be prompted to provide a rating on a specified scale. This rating may be an overall rating, or the user may be asked to rate the seller on each of a number of characteristics, attributes or criteria.

[0036] Accordingly, it will be appreciated that the pre-order attribute information may specify a number criteria that should be at a minimum satisfied or exceeded in order for

the pre-order as a whole to be satisfied. The pre-order attribute information may furthermore specify other characteristics regarding the pre-order (e.g., expiration).

[0037] The fields 94, 96 and 98, in the exemplary embodiment, are populated from drop-down menus associated with these fields. The pre-order user interface 90 also displays item description information (e.g., an image of the item). Certain of the fields within the pre-order user interface 90 may also be pre-populated with default inputs in order to increase the user friendliness of the interface 90. For example, the expiration field 98 may be presented with a default inputs of “four weeks”.

[0038] **Figures 6B-6E** show further examples of pre-order user interfaces that may be generated by the commerce facility 10 and presented to potential buyer in order to solicit pre-order attribute information. Specifically, **Figure 6B** illustrates an exemplary shipping address interface 100 that solicits shipping address information to be included within the pre-order attribute information from the potential buyer. **Figure 6C** illustrates an exemplary billing information interface 102 that advises the potential buyer whether or not credit card information for the relevant potential buyer is stored by the commerce facility 10. **Figure 6D** illustrates an exemplary credit card interface 14 that solicits credit card information from the potential buyer so as to enable the commerce facility 10, as will be described in further detail below, automatically to perform a credit card authorization in the event that the pre-order can be satisfied by a subsequent offering via the commerce facility 10. **Figure 6E** illustrates an exemplary confirmation interface 106 that communicates confirmation of the pre-order attribute information to the potential buyer, and also includes a user-selectable confirmation indicia 108 that is selectable by the potential buyer to finally place the pre-order. It will be noted from **Figure 6E** that the confirmation interface 106, in addition to providing the pre-order price information

presented by the potential buyer, also provides an estimated shipping and handling charge. In a further embodiment, tax information may also be provided within the confirmation interface 106.

[0039] Returning again to **Figure 3**, at block 68, the potential buyer then inputs the pre-order attribute information into the pre-order user interfaces, this pre-order attribute information then being received at the commerce facility 10 at block 70. It should be noted that this pre-order attribute information may be utilized to establish a new pre-order, or may be utilized by the commerce facility 10 to modify or update an existing pre-order. At block 72, in the case of an update to a pre-existing pre-order, a check is performed to determine whether the person making the pre-order (i.e., the potential buyer) is the "owner" (i.e., the person that originally authored the pre-existing pre-order) thereof.

[0040] At block 74, the commerce facility 10 proceeds to create (or update) a pre-order utilizing the received pre-order attribute information. More specifically, the pre-order logic 41 calls the set_pre-order database procedure 42 with the pre-order attribute information provided by the potential buyer, including appropriate login information. The set_pre-order database procedure 42 then executes to create an appropriate record within the pre-order table 28.

Methodology-Facilitating a Transaction by Detecting Correspondence between a Pre-order and an Offer

[0041] **Figures 7A-7C** show a flowchart illustrating a method 120, according to an exemplary embodiment of the present invention, of facilitating a transaction via a

network-based transaction facility whereby a correspondence is detected between a pre-order and an offer.

[0042] The method commences at block 122, with the generation and presentation of sales navigation and offering identification user interfaces. **Figure 8A** illustrates an exemplary sales interface 200 that may be generated at block 122 to facilitate navigation by a seller to a specific item (or offering). It will be noted that the interface 200 displays a number of item categories through which the seller may navigate to identify a particular item (or item type) that the seller wishes to sell. **Figure 8B** illustrates an exemplary offering identification user interface 204 that includes an item description field 206 to receive an item description in the exemplary form of a UPC code. For example, a seller wishing to sell a compact disk via the commerce facility 10 may input the UPC code for the relevant compact disc into the item description field 206, and in this way identify the compact disc to the commerce facility 10.

[0043] At block 124, the seller then navigates the navigation user interfaces, and inputs an offering identifier (e.g., a UPC or ISBN code) into an offering identification user interface. At block 126, the offering identifier is received at the commerce facility 10. At block 128, the commerce facility 10 then generates and presents a condition and notes user interface to solicit, from the seller, offer attribute information that specifies an offer. For example, the offer attribute information may specify the terms and conditions of the offer, as well as provide a description of a product or service that is being offered and certain criteria pertaining to the offer. **Figure 8C** illustrates an exemplary condition and notes user interface 208 that may be generated at block 128. The interface 208 solicits from the seller condition information specifying the condition of an item that is being offered. To this end, a condition field 210 is populated utilizing a drop-down menu that

presents a default set of condition values from which a condition value is selectable. The interface 208 also allows the seller to input notes regarding the item for sale into a notes field 212.

[0044] At block 130 the seller then provides offer attribute information, in the form of offering condition and notes information, via the condition and notes user interface. The offering condition and notes information is then received at the commerce facility 10 at block 132.

[0045] At block 134 a determination is made by the commerce facility 10 whether a seller account has been established with the commerce facility 10. If not, at block 136, a series of account setup user interfaces are generated and presented to the seller. **Figure 8D** and **Figure 8E** provide examples of such account setup user interfaces to 210 and 212. At block 138, the seller then inputs account setup information into the account setup user interfaces, this account setup information then being received by the commerce facility 10 at block 140. A seller account is then established.

[0046] At decision block 142, the matching logic 46 determines if any matching pre-orders are recorded within the pre-order table 28 for the offer being presented by the seller. It will be noted that this matching operation is performed prior to the offer being published by the commerce facility 10.

[0047] An exemplary query that may be issued by the matching logic 46 at decision block 142 to locate a pre-order within the pre-order table 28 that will be filled (or satisfied) by an offer from the seller is provided below:

INPUTS:

1 = product_id (unique identifier like UPC or ISBN)

2 = min. condition

3 = min. seller rating

SELECT pre-order_id, max_price, condition_grade, accept_unrated, min_seller_rating

FROM tx_pre-order p, usr_creditcard cc, inv_condition_grade g

WHERE p.release_id = **INPUT_1**

and p.condition_grade = g.grade_id

and g.rank <= (select rank from inv_condition_grade where grade_id = **INPUT_2**)

and min_seller_rating <= **INPUT_3**

and state_id < 10

and accept_unrated = 1

and EXPIRE_DATE > sysdate

and cc.credit_card_id = p.credit_card_id

and cc.credit_is_active = 1

and cc.credit_expire_date >= sysdate

ORDER BY max_price desc, p.create_date

[0048] It will be noted that the above query attempts to perform a match based on three criteria, namely an offering identifier (e.g., a product identifier such as UPC or an ISBN code, a minimum condition criteria, and a minimum seller rating. The product identifier information and the condition information for the offer are received at blocks 126 and 132 of the method 120 shown in **Figure 7A**. These criteria are compared against the product_type_id, condition_grade and min_seller_rating variables for all active records stored in the pre-order table 28 to locate any matching pre-orders. While the attributes (or criteria) described in the above exemplary query are used to identify pre-orders, it will nonetheless be appreciated that a narrow or wider range of attributes or criteria may be utilized by the matching logic 46 to identify matching pre-orders and offers at decision block 142.

[0049] If matching pre-orders are located at decision block 142, the method 120 proceeds to block 144 shown in **Figure 7B**, where the commerce facility 10 generates and presents a price user interface. The price user interface is generated to include a listing (or at least a description) of matching pre-orders located at decision block 142. In addition to the listing of matching pre-orders, a further transaction facilitating operation is performed in that a user-selectable option (e.g., to instantly satisfy any one of the listed pre-orders) is generated and included within the price user interface. In one exemplary embodiment, the user-selectable option is communicated by including a “sell now” user-selectable indicia 220 within the price user interface.

[0050] **Figure 8F** displays a price user interface 214, according to an exemplary embodiment of the present invention, which is shown to include a pre-order box 216 that includes attribute information regarding a located pre-order (i.e., price information 218) and a “sell now” indicia 220 that is user-selectable to instantly satisfy (or fill) the pre-

order with an appropriate offer (e.g., an offer for which the price matches the pre-order price).

[0051] It will be noted that the price user interface 214 also includes a price field 222 into which the seller may input price information, and also communicates comparative price information 224 to the seller. For example the comparative price information may include a recommended price (which is also inserted as a default price into the price field 222), a last sold price for the relevant item, an average listed price for similar items in a similar condition, a current highest price for similar items in a similar condition, a current lowest price for similar items in a similar condition, and a minimum listing price for the relevant item. The presentation of the comparative price information assists the seller in assessing whether the pre-order communicated in the pre-order box 216 is an attractive option, or alternatively helps the seller formulate a price to be inputted into the price field 222.

[0052] Moving on to block 146 of the method 120, the seller then inputs a price into the price field 222 of the price user interface 214 or alternatively selects the “sell now” indicia 220 within the price user interface 214.

[0053] At decision block 148, the commerce facility 10 makes a determination as to whether the seller has agreed to fill (or satisfy) the offer with the pre-order by selection, for example, of the “sell now” indicia 220, or has alternatively selected to list and publish the offer via the commerce facility 10. If it is determined at decision block 148 that the seller has selected to satisfy the order utilizing the pre-order, at block 150, the pre-order logic 41 invokes the above-described sell_now database procedure 44 to satisfy the pre-order. Specifically, the selected pre-order is set in a reserved state.

[0054] At block 152, the commerce facility 10 generates and presents a confirmation interface. An authorization of the credit card details of the buyer, who is the owner of the match pre-order, is performed at block 154. If it is determined that the credit card details are successfully authorized at decision block 156, at block 158 the pre-order is filled by the offer at block 158, and a “thank you” confirmation user interface is generated and presented at block 160. On the other hand, if the authorization of the credit cards details is determined to have failed at decision block 156, the pre-order is rejected at block 170.

[0055] Progressing now to **Figure 7C**, in the event that it is determined at decision block 142 that the matching logic 46 has failed to locate any matching pre-orders for an offer at block 172, shown in **Figure 7c**, the price user interface, described above, is generated to exclude the pre-order box 216, and the seller is presented only with the option of inputting a price into the price field 222. At block 174 the seller then inputs the price into the field 222, and the price information is then received at the commerce facility 10 at block 176. The offer is then registered, and published by the commerce facility 10.

[0056] In one embodiment of the present invention, where multiple matching pre-orders are located at decision block 142, only pre-order attribute information for the highest-priced pre-order will be displayed within the price user interface generated at block 144. In an alternative embodiment, only the oldest existing and active pre-order for which a match is detected will be included within the user interface generated at block 144. In yet a further alternative embodiment, a list of all active matched pre-orders may be displayed, so as enable the seller to choose between pre-orders to be filled by the order.

[0057] Upon conclusion of the method 120, the seller may be presented with a “thank you” user interface that provides shipping and confirmation information. Further, an email job may send emails to both the buyer and the seller confirming establishment of the transaction.

[0058] The method 120 described above seeks to fill a pre-order upon entry of an order by a seller, and prior to publication of the commerce facility 10. The method 120 automatically presents the seller, during an order specification process, with the option of filling the pre-order.

[0059] The provision of offer attribute information to the commerce facility 10 via user interfaces generated and presented by the commerce facility 10 is one way which the offer attribute information may communicated to the commerce facility 10. Another popular manner in which offer attribute information is presented to the commerce facility 10 is utilizing listing client programs that are executed on a client machine 32 to enable a seller to specify offer attribute information for multiple offers “offline” from the commerce facility 10. This offer attribute information is then download in a batch process from the client machine 32 to the commerce facility 10 via a network, such as the Internet 34. In this scenario it will be appreciated that it may be inconvenient to interrupt the batch process to provide pre-order information to the seller. Accordingly, in an alternative embodiment of the present invention, a “batch filling” method may be employed to fill pre-orders utilizing orders that are specified in a batch form.

[0060] **Figure 9** is a flow chart illustrating a method 240, according to an embodiment of the present invention, whereby a batch specification of multiple offers may be utilized by the commerce facility 10 to satisfy one or more pre-orders.

[0061] The method 240 commences at block 242 with a seller creating and communicating batch offers to the commerce facility 10 utilizing a bulk-listing seller tool (e.g., the Mister Lister seller tool provided by eBay, Inc.).

[0062] At decision block 244, the matching logic 46 determines, in the manner described above, whether any pre-orders match the offers in the batch. The matching operation performed at decision block 244 may differ from that performed at decision block 142 in that, at decision block 244, an exact match between offer attributes and pre-order attributes is required for a match to be detected. This is because, within the method 240, the seller is not presented with the option of filling a pre-order that does not exactly meet the offer attributes and criteria.

[0063] An exemplary query that may be issued by the matching logic 46 at decision block 244 to find a pre-order within the pre-order table 28 that will be filled (or satisfied) by an offer within a batch of offers from the seller is provided below:

(buyer has opted to allow unrated sellers)

INPUTS:

1 = release_id (unique identifier like UPC or ISBN)

2 = max. price of an item

3 = min. seller rating

4 = min. condition

```
select i.item_id, i.offer_id, si.account_id seller_id, i.price, i.product_type_id
```

from inv_item i, usr_seller_info si, usr_seller_statistics stats, inv_condition_grade g

where i.release_id = **INPUT_1**

and i.offer_id is not null

and i.price <= **INPUT_2**

and i.seller_id = stats.seller_id(+)

and (stats.avg_rating IS NULL OR **INPUT_3** <= stats.avg_rating)

and i.condition_grade = g.grade_id

and g.rank >= (select rank from inv_condition_grade

where grade_id = **INPUT_4**)

and i.Item_State_ID=1

and i.item_state_id_raw = 1

and i.available_quantity > 0

and i.seller_id = si.seller_id

order by i.price desc

[0064] If one or more active pre-orders that may be filled by offers within the batch are located decision block 244, at block 246 the matching pre-orders are set into a reserved state. If the order is confirmed at decision block 248 (e.g., after authorization of credit card details as described above), the establishment of the transaction is communicated to

both the buyer and seller by the email job at block 252. Alternatively, if the order is not confirmed the relevant pre-orders are then reactivated at block 250.

[0065] Returning to decision block 244, in the event that no pre-orders are located that may be filled by the orders included within the batch, at block 254, the offers within the batch are then listed by the commerce facility 10.

[0066] In summary, the methods 120 and 240 differ with respect to a transaction facilitating operation that is performed upon detecting a pre-order that may potentially be filled by an offer. Specifically, within the method 120, a minimum overall correspondence between offer and pre-order attribute information is detected, and the seller is then prompted to either accept or reject a pre-order that may or may not deviate from the full set of attribute information for the relevant offer. Within the method 240, on the other hand, a high degree of correspondence between the offer and pre-order attribute information is required, as a transaction may summarily and automatically be established upon the detection of a pre-order with a predetermined degree of correspondence (e.g., the pre-order may only be filled by the offer if there is an exact correspondence between all attribute information of the pre-order and the offer). In short, the present invention contemplates that various degrees of correspondence may be utilized to detect a match between a pre-order and an offer, these varying degrees of correspondence including an exact correspondence, a correspondence below a maximum threshold, a correspondence above a minimum threshold, and a correspondence within a predetermined range. Further, the above-described attributes may be specifying at least one criterion, and the correspondence may be detected by determining whether that particular criterion is met, or exceeded.

Computer System

[0067] **Figure 10** shows a diagrammatic representation of a machine in the exemplary form of a computer system 300 within which a set of instructions, for causing the machine to perform any one of the methodologies discussed above, may be executed. In alternative embodiments, the machine may comprise a network router, a network switch, a network bridge, Personal Digital Assistant (PDA), a cellular telephone, a web appliance or any machine capable of executing a sequence of instructions that specify actions to be taken by that machine.

[0068] The computer system 300 includes a processor 302, a main memory 304 and a static memory 306, which communicate with each other via a bus 308. The computer system 300 may further include a video display unit 310 (e.g., a liquid crystal display (LCD) or a cathode ray tube (CRT)). The computer system 300 also includes an alphanumeric input device 312 (e.g., a keyboard), a cursor control device 314 (e.g., a mouse), a disk drive unit 316, a signal generation device 18 (e.g., a speaker) and a network interface device 320

[0069] The disk drive unit 316 includes a machine-readable medium 324 on which is stored a set of instructions (i.e., software) 326 embodying any one, or all, of the methodologies described above. The software 326 is also shown to reside, completely or at least partially, within the main memory 304 and/or within the processor 302. The software 326 may further be transmitted or received via the network interface device 320. For the purposes of this specification, the term "machine-readable medium" shall be taken to include any medium that is capable of storing or encoding a sequence of instructions for execution by the machine and that cause the machine to perform any one of the methodologies of the present invention. The term "machine-readable medium"

shall accordingly be taken to included, but not be limited to, solid-state memories, optical and magnetic disks, and carrier wave signals.

[0070] Thus, a method and system to facilitate pre-ordering via an electronic commerce facility, and automatically to facilitate the satisfying of a pre-order upon listing of an appropriate offer via the electronic commerce facility, have been described. Although the present invention has been described with reference to specific exemplary embodiments, it will be evident that various modifications and changes may be made to these embodiments without departing from the broader spirit and scope of the invention. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.